

Message

From: G D Beckett [g.d.beckett@aquiver.com]
Sent: 4/5/2018 6:44:58 PM
To: Whittier, Robert [Robert.Whittier@doh.hawaii.gov]; Matt Tonkin [matt@sspa.com]; TU, LYNDSEY [Tu.Lyndsey@epa.gov]; Grange, Gabrielle Fenix [Gabrielle.Grange@doh.hawaii.gov]; g.d.beckett@aquiver.com; Donald Thomas [dthomas@soest.hawaii.edu]
Subject: Re: Red Hill Modeling

Yes indeed, thanks Bob! So this gradient implies a direction consistent with low level impacts observed from time to time at some distal monitoring points, while both the g.w. & LNAPL models assume flow in an opposing direction. Measurement before models! The Navy seems to be quite a bit divergent from what little reality we can observe...

Best regards and thanks again for this.

-----Original Message-----

From: Whittier, Robert [mailto:Robert.Whittier@doh.hawaii.gov]
Sent: Thursday, April 5, 2018 12:39 PM
To: 'Matt Tonkin', 'TU, LYNDSEY', 'Grange, Gabrielle Fenix', g.d.beckett@aquiver.com, 'Donald Thomas'
Subject: Re: Red Hill Modeling

Matt,

Sure here it is. Let me know if you have any questions on this.

Thanks,
Bob W.

From: Matt Tonkin <matt@sspa.com>
Sent: Thursday, April 5, 2018 8:28:14 AM
To: Whittier, Robert; TU, LYNDSEY; Grange, Gabrielle Fenix; g.d.beckett@aquiver.com; Donald Thomas
Subject: RE: Red Hill Modeling

Bob:

Thanks for this update, the timing is very important - is there any chance you have and could share those recent data and the plot that you made?

Matthew J. Tonkin
S.S. Papadopoulos & Assoc., Inc.
505 N. Pine St., Williamsfield, IL 61489-9517
Web: www.sspa.com // Email: matt@sspa.com // Skype: mattsspa
Office: (309) 616 9060 // Cell: (508) 815-9886

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From: Whittier, Robert [mailto:Robert.Whittier@doh.hawaii.gov]
Sent: Thursday, April 5, 2018 1:25 PM

To: TU, LYNDSEY <Tu.Lyndsey@epa.gov>; Grange, Gabrielle Fenix <Gabrielle.Grange@doh.hawaii.gov>; Matt Tonkin <matt@sspa.com>; g.d.beckett@aquiver.com; Donald Thomas <dthomas@soest.hawaii.edu>

Subject: Red Hill Modeling

Hi Lyndsey and All,

On Monday I received the latest Oil/Water Interface Report. As I normally do I plotted the water table elevations for the tunnel wells (i.e. RHMW03, RHMW02, RHMW01, and RHMW05). This is a line of wells that covers a mauka to makai distance of about 0.45 mi. The resulting gradient was 0.2 ft/mi going to the northeast or mauka. This implies the groundwater flow direction beneath the USTs that is exactly opposite of the flow direction simulated by the latest Red Hill groundwater flow model. I don't think this discrepancy has been adequately explained in spite of being brought up repeatedly. It appears from the proposed agenda that we moving from the groundwater flow model to the fate and transport model. Since the fate and transport model relies on the groundwater flow model, moving on to the fate and transport model seems premature.

Thanks,
Bob W.